



National Aeronautics and  
Space Administration

**Principal Center for Regulatory Risk Analysis and Communication**

## **REGULATORY SUMMARY**

### ***Proposed Rule PSD and Title V GHG Tailoring Rule***

This information was prepared by NASA's Principal Center for Regulatory Risk Analysis and Communication (RRAC PC). If you have further questions or need assistance, please contact the RRAC PC Manager, Sharon Scroggins (256-544-7932, [sharon.scroggins@nasa.gov](mailto:sharon.scroggins@nasa.gov)).

## **Introduction**

On 30 September 2009, the U.S. Environmental Protection Agency (EPA) announced the availability of a pre-publication version of the [proposed rule](#) titled, "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule," for changes to the permitting requirements for large existing industrial facilities emitting more than 25,000 tons per year of carbon dioxide equivalents (CO<sub>2</sub>e). The rule proposes new thresholds for greenhouse gas (GHG) emissions that define when Clean Air Act (CAA) permits under the New Source Review (NSR) Prevention of Significant Deterioration (PSD) and Title V operating permits programs would be required for new or existing industrial facilities. EPA has proposed to tailor the major source applicability thresholds for GHG emissions under the PSD and Title V programs and to set a PSD significance level for GHG emissions. Facilities emitting more than 25,000 tons per year of GHGs would be required to obtain permits to demonstrate they are using best practices and technologies to minimize GHG emissions. Comments regarding the proposed rule will be due to EPA 60 days after publication in the *Federal Register* (FR).

## **Background**

The proposed rule for the regulation of GHGs under the CAA stems from several judicial and regulatory actions over the past several years, as described in the following sections.

### **Massachusetts v. EPA**

On 2 April 2007, in *Massachusetts v. EPA* [549 U.S. 497 (2007)], the U.S. Supreme Court held that GHGs are air pollutants covered by the CAA and subject to regulation under Section 202(a) of the CAA. The decision held that the EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles or motor vehicle engines may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

### **2008 Advance Notice of Proposed Rulemaking**

On 30 July 2008, EPA published an Advance Notice of Proposed Rulemaking (ANPR) for "Regulating Greenhouse Gas Emissions under the CAA" (73 FR 44354) in response to the

Massachusetts v. EPA court decision. The ANPR outlined options and solicited public comment regarding regulatory approaches and issues associated with the regulation of GHGs under the CAA.

## Light-duty Motor Vehicle Rule

EPA currently is developing the light-duty motor vehicle rule to regulate GHGs from mobile sources under Title II of the CAA ([74 FR 24007](#); 22 May 2009). EPA expects to promulgate this rule by the end of March 2010. Promulgation of the light-duty motor vehicle rule will trigger the applicability of PSD and Title V requirements for stationary sources that emit GHGs. On 28 September 2009, EPA also issued a proposed rule ([74 FR 49453](#)) with the National Highway and Traffic Safety Administration (NHTSA) to establish a National Program consisting of new standards for light-duty vehicles that will reduce GHG emissions and improve fuel economy for passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016.

## GHG Mandatory Reporting Rule

On 22 September 2009, EPA [announced](#) the availability of a pre-publication version of the [preamble](#) and [final rule](#) text for mandatory reporting of GHG emissions from relatively large sources in the United States, as required by the [Fiscal Year \(FY\) 2008 Consolidated Appropriations Act](#). The purpose of this rule is to collect accurate and comprehensive GHG emissions data to inform future policy decisions. The rule does not require the control of GHGs; rather, it requires that sources above certain threshold levels monitor and report GHG emissions.

## Summary of the Proposed Rule

### Legal Basis

The proposed GHG permitting rule is based on the legal doctrines of “administrative necessity” and “absurd results,” to phase in applicability thresholds for both the PSD and Title V programs for sources of GHG emissions, as outlined in the following sections.

### Administrative Necessity

In the proposal, EPA states that the regulation of GHGs under PSD and Title V would result in a flood of permit applications submitted to regulatory agencies and probably would overwhelm the administration of those programs. Under these circumstances, the judicial doctrine of administrative necessity authorizes EPA to take action to make PSD and Title V requirements administrable, including considering ways to streamline the PSD and Title V requirements.

### Absurd Results

EPA is proposing specific emission thresholds in lieu of applying the existing PSD emission thresholds for criteria pollutants of 100/250 tons per year (tpy) to GHG sources, based on the “absurd results” judicial doctrine. A literal application of the 100/250-tpy threshold would render it impossible for permitting authorities to meet the requirement in CAA Section 165(c) to

process permit applications within 12 months. It is anticipated that the number of permit applications would increase by 150-fold and exceed administrative resources.

A literal application of the 100/250-tpy thresholds would roll into the PSD program thousands of smaller sources that Congress did not intend to include, and would result in an administrative burden on the regulators that would affect the regulation of the larger sources that are intended to be subject to the PSD program. These circumstances qualify as “absurd results” that merit avoiding a literal application of the threshold provision.

## Proposed Applicability and Thresholds

The proposed rule would limit applicability of the permitting requirements to facilities emitting more than 25,000 tpy of GHGs on a CO<sub>2</sub>e basis. Small farms, restaurants, and many other types of small facilities would not be subject to these permitting programs. The proposed rule focuses on controlling or limiting the emissions of the following six GHGs—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). EPA has not yet identified specific source categories affected by this proposed rule, but plans to develop sector- and source-specific guidance that would help permitting authorities and affected sources understand GHG emissions, methods for estimating those emissions, control strategies, and available GHG measurement and monitoring techniques. The guidance also will include information about best available control technology determinations as required for PSD permits.

EPA has proposed to tailor the major source applicability thresholds for GHG emissions under the PSD and Title V programs and to set a PSD significance level for GHG emissions. The proposed rule would phase in the applicability thresholds for both the PSD and Title V programs for sources of GHG emissions. The first phase, which would last 6 years, would establish a temporary level for the PSD and Title V applicability thresholds at 25,000 tpy, on a CO<sub>2</sub>e basis, and a temporary PSD significance level for GHG emissions of between 10,000 and 25,000 tpy CO<sub>2</sub>e. EPA also would take other streamlining actions during this time. Within 5 years of the final rule, EPA would conduct a study to assess issues regarding administration of the rule. Then EPA would conduct another rulemaking for the second phase, to be completed by the end of the sixth year, that would promulgate revised applicability and significance level thresholds and other streamlining techniques, as appropriate. EPA is soliciting comments about the proposed thresholds and approach.

## Global Warming Potential Calculations

GHGs contribute to climate change because they have a global warming potential (GWP), or a measure of how much a given mass of [GHG](#) is estimated to contribute to [global warming](#). GWP is a relative scale that compares the [gas](#) in question to that of the same mass of [carbon dioxide](#), which has a GWP of 1. GHG emission calculations can vary depending on the GWP values used. In the proposed rule, EPA requires the use of the GWP values established by the Intergovernmental Panel on Climate Change (IPCC) in its [Second Assessment Report \(SAR\) \(IPCC 1996\)](#). Emissions of gases other than CO<sub>2</sub> are translated into CO<sub>2</sub> equivalents by calculating emissions using the gases’ GWPs.

EPA is soliciting comments about whether GHG metrics should be quantified in a different way. Possible options listed include addressing:

- Each GHG individually or as a single GHG group;
- All six of the GHGs, or only those four GHGs subject to controls in the light-duty vehicle rule; or
- On the basis of their actual tonnage or their equivalent tonnage based on GWP

EPA also is soliciting comments about whether to address rare cases in which facilities may emit only small quantities of relatively high-GWP, non-CO<sub>2</sub> GHGs

EPA also is seeking comments regarding whether it should refine the CO<sub>2</sub>e metric, such as adding a 100- or 250-tpy metric that is mass-based. A source would then be subject to PSD and Title V only if its GHG emissions exceeded the statutory threshold levels on an actual tonnage basis, and if its GHG emissions exceeded the first phase threshold emissions on a CO<sub>2</sub>e basis. However, EPA is concerned that efforts to address this circumstance (requiring separate tracking of individual GHG mass emissions in addition to CO<sub>2</sub>e for up to six GHGs) would be complex and confusing to administer.

## Phase-in Approach

EPA intends to evaluate ways to streamline the process for identifying GHG emissions control requirements and issuing permits to reduce costs and increase efficiency for both sources and state permitting agencies, which in most cases are responsible for issuing the permits.

Under the proposed rule, EPA must reevaluate the final GHG emissions thresholds after the initial phase, during which PSD and Title V permitting authorities will gain experience in issuing permits to GHG-emitting facilities. By the end of the first phase, EPA plans to complete a study to evaluate whether it is administratively feasible for PSD and Title V permitting authorities to adequately administer their programs at lower GHG thresholds. After reviewing the study results, EPA will complete a follow-on regulatory action within 1 year. The follow-on rule will establish thresholds during the second phase, either by confirming the need to retain the GHG permitting thresholds for PSD and/or Title V at the Phase 1 levels, or by establishing different GHG threshold levels that more accurately reflect the administrative capabilities of permitting authorities to address GHGs. EPA requests comments regarding the timeframes for the phases.

## Applicability to NASA

Centers that potentially emit more than 25,000 tpy of GHGs on a CO<sub>2</sub>e basis may be required to obtain PSD or Title V permits if the proposed rule is finalized. Centers are urged to review the proposed rule available on EPA's [website](#) for potential applicability. Comments about the proposed rule are due to EPA 60 days after publication in the FR and may be submitted directly to the RRAC PC Manager.